General

Title

Diagnostic imaging: percentage of exams with confirming colonoscopies for a greater than or equal to 10 mm polyp detected by CT colonography (CTC) (true positive rate).

Source(s)

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of exams with confirming colonoscopies for a greater than or equal to 10 mm polyp detected by computed tomography colonography (CTC) (true positive rate).

Rationale

Colorectal cancer is a leading cause of mortality. Early detection programs provide an opportunity to save many lives. Computed tomography (CT) colonography permits a minimally invasive, low-risk evaluation for cancerous polyps. Studies have shown that CT colonography is effective in screening patients with average risk of cancer. The True Positive Rate measure is designed to monitor and improve the interpretation quality of these studies in routine clinical practice.

An assessment of diagnostic or interpretative performance is an essential part of a cancer screening and diagnosis program. This is a primary measure of diagnostic accuracy. High true positive rate is indicative of patient receiving most clinically appropriate screening, where imaging findings of disease are highly

likely to be confirmed as true.

Evidence for Rationale

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

Gluecker TM, Johnson CD, Wilson LA, MacCarty RL, Welch TJ, Vanness DJ, Ahlquist DA. Extracolonic findings at CT colonography: evaluation of prevalence and cost in a screening population. Gastroenterology. 2003 Apr;124(4):911-6. PubMed

Hassan C, Pickhardt P, Laghi A, Kim D, Zullo A, Iafrate F, Di Giulio L, Morini S. Computed tomographic colonography to screen for colorectal cancer, extracolonic cancer, and aortic aneurysm: model simulation with cost-effectiveness analysis. Arch Intern Med. 2008 Apr 14;168(7):696-705. [58 references] PubMed

Macari M, Nevsky G, Bonavita J, Kim DC, Megibow AJ, Babb JS. CT colonography in senior versus nonsenior patients: extracolonic findings, recommendations for additional imaging, and polyp prevalence. Radiology. 2011 Jun;259(3):767-74. PubMed

O'Connor SD, Pickhardt PJ, Kim DH, Oliva MR, Silverman SG. Incidental finding of renal masses at unenhanced CT: prevalence and analysis of features for guiding management. AJR Am J Roentgenol. 2011 Jul;197(1):139-45. PubMed

Pickhardt PJ, Hanson ME, Vanness DJ, Lo JY, Kim DH, Taylor AJ, Winter TC, Hinshaw JL. Unsuspected extracolonic findings at screening CT colonography: clinical and economic impact. Radiology. 2008 Oct;249(1):151-9. PubMed

Pickhardt PJ, Hanson ME. Incidental adnexal masses detected at low-dose unenhanced CT in asymptomatic women age 50 and older: implications for clinical management and ovarian cancer screening. Radiology. 2010 Oct;257(1):144-50. PubMed

Pickhardt PJ, Kim DH, Meiners RJ, Wyatt KS, Hanson ME, Barlow DS, Cullen PA, Remtulla RA, Cash BD. Colorectal and extracolonic cancers detected at screening CT colonography in 10,286 asymptomatic adults. Radiology. 2010 Apr;255(1):83-8.

Pickhardt PJ, Lee LJ, del Rio AM, Lauder T, Bruce RJ, Summers RM, Pooler BD, Binkley N. Simultaneous screening for osteoporosis at CT colonography: bone mineral density assessment using MDCT attenuation techniques compared with the DXA reference standard. J Bone Miner Res. 2011 Sep;26(9):2194-203. PubMed

Pickhardt PJ, Pooler BD, Lauder T, del Rio AM, Bruce RJ, Binkley N. Opportunistic screening for osteoporosis using abdominal computed tomography scans obtained for other indications. Ann Intern Med. 2013 Apr 16;158(8):588-95. PubMed

Summers RM, Baecher N, Yao J, Liu J, Pickhardt PJ, Choi JR, Hill S. Feasibility of simultaneous computed tomographic colonography and fully automated bone mineral densitometry in a single examination. J Comput Assist Tomogr. 2011 Mar-Apr;35(2):212-6. PubMed

Summers RM, Liu J, Sussman DL, Dwyer AJ, Rehani B, Pickhardt PJ, Choi JR, Yao J. Association between visceral adiposity and colorectal polyps on CT colonography. AJR Am J Roentgenol. 2012 Jul;199(1):48-57. PubMed

Veerappan GR, Ally MR, Choi JH, Pak JS, Maydonovitch C, Wong RK. Extracolonic findings on CT colonography increases yield of colorectal cancer screening. AJR Am J Roentgenol. 2010 Sep;195(3):677-86. PubMed

Yee J, Sadda S, Aslam R, Yeh B. Extracolonic findings at CT colonography. Gastrointest Endosc Clin North Am. 2010 Apr;20(2):305-22. PubMed

Primary Health Components

Computed tomography colonography (CTC); colonoscopy; polyp

Denominator Description

Number of computed tomography colonography (CTC) exams with confirming colonoscopies for a greater than or equal to 10 mm polyp (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of exams with a confirmed greater than or equal to 10 mm polyp at colonoscopy that corresponds to a polyp detected by computed tomography colonography (CTC) (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

The measures in this set are being made available without any prior formal testing. However, these measures are included in the Centers for Medicare and Medicaid Services (CMS) approved American College of Radiology (ACR) National Radiology Data Registry, a CMS Physician Quality Reporting System (PQRS) Qualified Clinical Data Registry since 2014.

The ACR recognizes the importance of thorough testing all of its measures and encourages ongoing robust testing of the ACR National Radiology Data Registry measurement set for feasibility and reliability by organizations or individuals positioned to do so. The ACR will welcome the opportunity to promote such testing of these measures and to ensure that any results available from testing are used to refine the measures on an ongoing basis. Since these measures are in use for quality improvement and reporting, we can support data analysis of registry data to perform the testing, such as evaluation of gaps for validity testing, and signal-to-noise estimation for reliability testing.

Evidence for Extent of Measure Testing

Blakey A. (Administrator, Quality Management Programs, American College of Radiology, Reston, VA). Personal communication. 2016 Mar 7. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Ambulatory Procedure/Imaging Center

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Individual Clinicians or Public Health Professionals

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Health and Well-being of Communities
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Diagnostic Evaluation

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Number of computed tomography colonography (CTC) exams with confirming colonoscopies for a greater

than or equal to 10 mm polyp

Exclusions
Number of exams with confirming colonoscopies that did not reach the level of lesion, or with no confirming colonoscopy

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
Number of exams with a confirmed greater than or equal to 10 mm polyp at colonoscopy that corresponds to a polyp detected by computed tomography colonography (CTC)

A polyp confirmed by colonoscopy corresponds to a polyp detected at CTC if it is within 1 segment and 50% of the size of the CTC polyp, e.g., a polyp of 12 mm at CTC must have a measurement of at least 6 mm at colonoscopy.

Exclusions
Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

Registry data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

CT colonography true positive rate.

Measure Collection Name

National Radiology Data Registry Measurement Set

Submitter

American College of Radiology - Medical Specialty Society

Developer

American College of Radiology - Medical Specialty Society

Funding Source(s)

None

Composition of the Group that Developed the Measure

The American College of Radiology (ACR) National Radiology Data Registry (NRDR) helps facilities benchmark outcomes and process-of-care measures and to develop quality improvement programs. The composition of the workgroup is has representation from each of our six data registries:

CT Colonography Registry Committee (CTC)
Dose Index Registry Committee (DIR)
General Radiology Improvement Database Committee (GRID)
National Mammography Database Committee (NMD)
Lung Cancer Screening Registry Committee (LCSR)
IR & INR Registries (Interventional Radiology)

Committee Members

Morin Richard, PhD, FACR, Chair of NRDR

Kalpana Kanal, PhD, Chair of DIR
Zuley Margarita, MD, Chair of NMD
Abe Dachman, MD, Chair of CTC Committee
Frank Rybicki, MD, Chair of Metrics Committee
Siegel Eliot, MD, RSNA Liaison
Chad Calendine, MD, Co-Chair of GRID
Geoffrey Wiot, Co-Chair of GRID
Jeremy Durack, Chair of IR Registry Committee
Ella Kazerooni, Co-Chair of Lung-Cancer Screening Committee
Deni Aberle, Co-Chair of Lung-Cancer Screening Committee

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Mar

Measure Maintenance

This measure is reviewed annually

Date of Next Anticipated Revision

2017 Mar

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in March 2017.

Measure Availability

Source available from the American College of Radiology (ACR) Web site .

For more information, contact ACR at 1891 Preston White Drive, Reston, VA 20191; Phone: 703-648-8900; E-mail: nrdr@acr.org; Web site: www.acr.org .

NQMC Status

This NQMC measure summary was completed by ECRI Institute on December 11, 2015. The information was verified by the measure developer on March 7, 2016.

The information was reaffirmed by the measure developer on March 3, 3017.

Copyright Statement

This NQMC summary is based on the original measure, which is subject to the measure developer's copyright restrictions.

Production

Source(s)

American College of Radiology (ACR). National Radiology Data Registry: qualified clinical data registry. Non-PQRS measures. Reston (VA): American College of Radiology (ACR); 2015 Mar. 49 p.

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